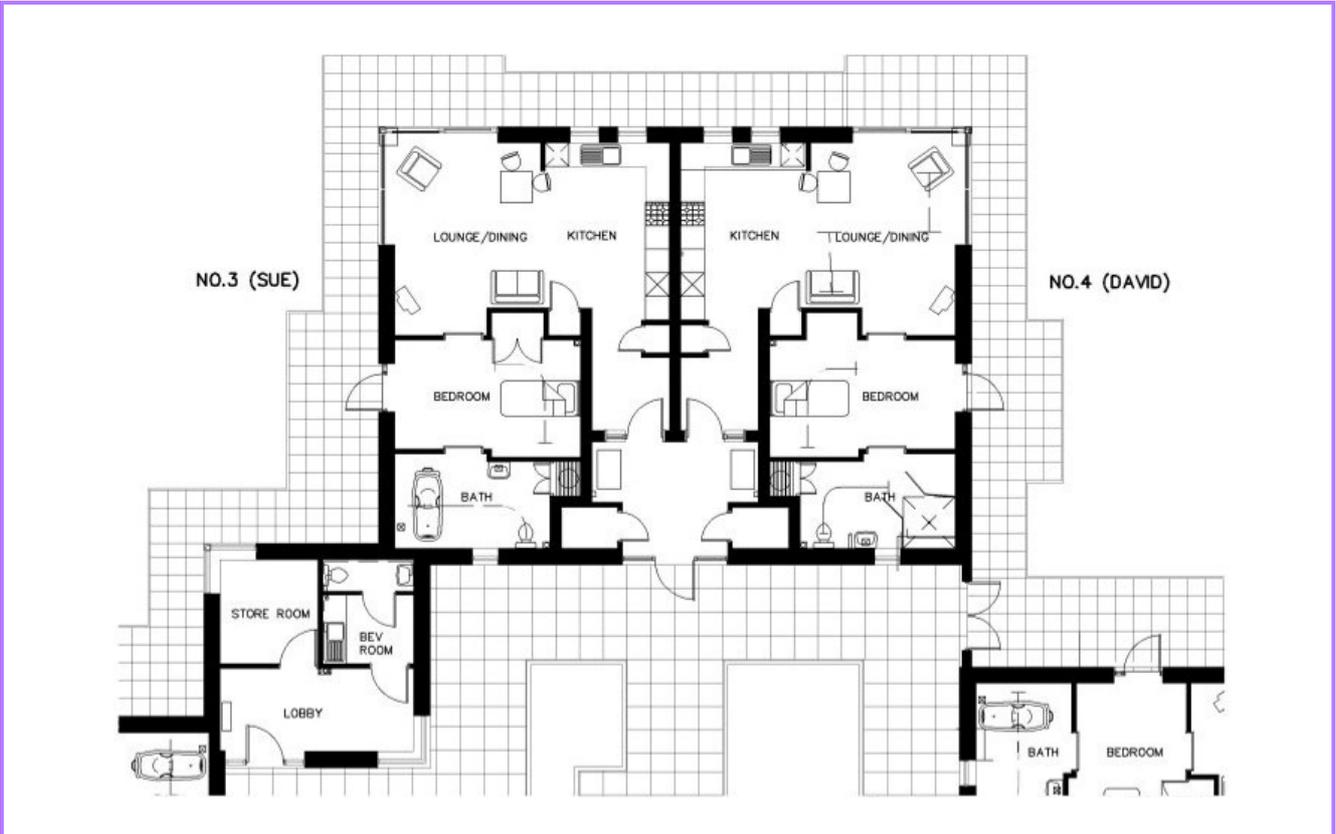




CASE STUDY: HOUSING
DRYBRIDGE GARDENS





Sustainability Strategy

The brief required the building to have a high level of sustainability, and the scheme utilises a Tradis timber frame cassette system insulated with Warmcell recycled newspaper insulation, helping to achieve U-values of $0.15\text{W}/\text{m}^2\text{K}$ through the walls and $0.13\text{W}/\text{m}^2\text{K}$ through the roof.

A green water system is used for recycling rainwater, and roof-mounted solar hot water panels provide 30% of the residents' hot water requirements.

The building is protected from the prevailing wind by the Listed existing walls of the previous courtyard garden. The courtyard design allows all interior rooms to have good levels of natural daylight, helping to reduce the reliance on artificial lights.

All materials were carefully chosen for their low environmental impact, taking into account life-cycle costs, recycling, embodied energy and transportation.

Sustainability Overview

- Heat loss reduced by heavily insulating the building fabric, achieving U-values far in advance of current building regulation standards
- Off-site Timber Frame Cassette Construction with recycled newspaper insulation
- Rainwater Recycling
- Solar Hot Water Panels
- Building orientated to allow good levels of natural light into all areas of the building
- Materials chosen for their low environmental impact

CASE STUDY: HOUSING

DRYBRIDGE GARDENS

Name of Building

Drybridge Gardens—Particular Needs
Accommodation

Date Completed

December 2003

Project Cost

£940,000

Building Type

Housing

Location

Monmouth, Monmouthshire

Client

Charter Housing Association and Mon-
mouthshire County Council

Main Contractor

Carter Lauren Ltd

Awards

RSAW Housing Design Award 2004

Civic Trust Mention 2005

'Building For Life: Wales' website—
exemplar housing project selected by De-
sign Commission for Wales

'Model Design Guide for Wales: Residen-
tial Development—featured case study
published by Planning Officers Society
Wales

Building Overview

Drybridge Gardens provides long term accommodation for 6 severely disabled people, giving them independence and a more normal living environment than the institutional provision in which they had lived for the past 30 years. The residents require twenty-four hour care and accommodation that could adapt and respond to the changing physical needs of each individual. This is achieved by providing six single storey homes, in three semi-detached blocks, grouped around a communal area for meeting people and relaxing.

The design takes its theme from its site within a Grade 2 Listed Walled Garden, which was once the kitchen garden of the adjacent Listed Drybridge House. Low-pitched 'butterfly' roofs concealed behind parapets maintain the horizontal form, rather than traditional pitched roofs that would have protruded above the wall. Orientated to allow all the homes to have some direct sunlight during the day, the homes are all fitted with adjustable kitchens and bathrooms to help promote independence for the residents. The external materials of natural stone and render were carefully selected to be sympathetic to the surroundings.

The design allows residents access to all areas with level thresholds and automated doors, which are activated via a sensor attached to each residents' wheelchair. The central courtyard provides an intimate and protected landscaped 'external room' in which the residents can relax and enjoy their own private space. A loggia around three sides of the courtyard allows residents to move freely between bungalows protected from the weather and heavily planted raised beds soften the buildings and provides sensory delight for the residents.

